MULTIMEDIA UNIVERSITY STUDENT IDENTIFICATION NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2018/2019

DOM5014 – OPERATIONS MANAGEMENT

(All sections / Groups)

27 MAY 2019
9.00 am – 11.00 am
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **6** pages with **2** sections.
2. Answer **ALL** questions.
3. For section A shade your answers in the OMR sheet provided.
4. For section B, write your answers in the answer booklet provided.

SECTION A – 20 Multiple Choice Questions. [Total: 20 Marks]

***Instruction**: Answer **ALL** questions from this section and shade your answers in the OMR sheet provided.*

1. Operations management is applicable _____.
   a. to the service sector
   b. to service exclusively
   c. to the manufacturing sector
   d. to all firms, whether manufacturing or service

2. _____ is transferring activities that traditionally been internal to external suppliers.
   a. Differentiation
   b. Outsourcing
   c. Subcontracting
   d. Cost leadership

3. Which of the following statement is **FALSE** about organisational mission?
   a. They reflect a company purpose.
   b. They define a company's reason for existence.
   c. They are formulated after strategies are known.
   d. They provide guidance for functional area missions.

4. A forecast with a time horizon of 3 months to 3 years is typically called a _____.
   a. short-range forecast
   b. medium-range forecast
   c. strategic forecast
   d. long-range forecast

5. In which stage of product life cycle is product strategy likely to focus on improved cost control?
   a. Introduction.
   b. Maturity.
   c. Growth.
   d. Decline.

6. _____ determines what will satisfy the customer by translating the customers' desires into the target design.
   a. House of quality
   b. Quality function deployment
   c. Product strategy options
   d. Generating new product

7. All of the following costs are likely to decrease as a result of better quality **EXCEPT** _____.
   a. scrap cost
   b. warranty cost
   c. maintenance cost
   d. inspection cost

Continued...

8. Which of the following **BEST** describes about quality referring to manufacturing based?
   a. Better performance and more features.
   b. Specific and measurable attributes of the product.
   c. Conformance to standards and making it right at the first time.
   d. Evaluating product, parts and services during production cycle time.

9. In most manufacturing industries, which of the following would likely represent the largest cost to the firm?
   a. Purchasing.
   b. Advertising.
   c. Insurance.
   d. Transportation.

10. All the following refer to the types of inventory **EXCEPT** _____.
   a. raw material
   b. finished goods
   c. work-in process (WIP)
   d. anticipated engineering changes

11. ABC analysis divides on-hand inventory into three classes based on _____.
   a. item quality
   b. annual demand
   c. annual dollar volume
   d. number of units on hand

12. Which of the following is **NOT** one of the seven waste?
   a. Motion.
   b. Overproduction.
   c. Queues.
   d. Reporting.

13. Automobile is an example of _____.
   a. repetitive focus
   b. mass customization
   c. product focus
   d. process focus

14. The reason of fast food restaurant are often found in close proximity to each other is _____.
   a. low cost
   b. availability of skilled labour
   c. they enjoy the competition
   d. location near high traffic flows

15. A location decision for Tesco supermarket is more focused on _____.
   a. cost
   b. revenue
   c. labour
   d. environmental

16. AIA Insurance company allows their staff to report to work between 9.00am to 10.00 am but still requires them to work 8 hours per day. This shows that AIA Insurance company practising _____.
   a. flextime
   b. part-time status
   c. standard work schedule
   d. compressed workweek

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17. The _____ layout's seeks the best personnel and machine utilisations in repetitive or continuous production.
    a. work cell
    b. product oriented
    c. job shop
    d. fixed position

18. When Nestle wants to display its products at Tesco shelves, Nestle must _____.
    a. pay for slotting fees
    b. pay for marketing fees
    c. pay for Tesco advertising
    d. Pay for Tesco annual rent fees

19. The objective of maintenance and reliability is to _____.
    a. maintain the capability of the system
    b. ensure that no breakdowns will ever occur
    c. ensure that maintenance employees are fully utilised
    d. ensure that breakdowns do not affect the quality of the products

20. Which of the following is **NOT** one of the impacts of breakdown maintenance?
    a. Disruption operations.
    b. May need employee to do overtime.
    c. Operations can run as usual.
    d. May need parts at odd hours.

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SECTION B – 4 Structured Questions. [Total: 80 Marks]
***Instruction**: Answer **ALL** questions. Answer should be written in the answer booklet provided.*

QUESTION 1

(a) What is productivity? (2 marks)

(b) Rizalman Ibrahim is a professional designer who came up with a new 'baju kurung' collection for Hari Raya Aidilfitri in the year 2018. Due to huge demand from customers, he needs to produce 1500 pieces of baju kurung per day with the following resources:

Labour:	600 hours per day @ RM15 per hour
Raw Material:	25,000 pcs per day @ RM2 per pc
Energy:	RM3,000 per day
Capital costs:	RM8,000 per day
Miscellaneous	RM500 per day

Table 1

Note: State your answers in three (3) decimal points

i. Compute the labour productivity. (2 marks)

ii. Compute the multifactor productivity. (3 marks)

iii. Compute the percent change in multifactor productivity if the capital cost reduces to RM5, 000 per day without any other change in other inputs. (5 marks)

Due to very good response during Hari Raya Aidilfitri collections, Rizalman Ibrahim has decided to open pre-order basis for the next celebration which is Hari Raya Aidiladha collection. The pre-order only limited to 2000 pieces of baju kurung per day. They have 5 staff to work for this project and each working 8 hours per day. Raw material, energy and capital cost now change at RM80, 000, RM3, 500, and RM8, 500 respectively. While the labour cost and miscellaneous are remain the same.

iv. Compute the labour productivity for the pre-order basis. (2 marks)

v. Calculate the multifactor productivity for pre-order basis. (3 marks)

vi. If the labour cost are RM12, 000, compute the new multifactor productivity. (3 marks)

(Total: 20 marks)

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QUESTION 2

(a) ***Table 2*** shows the sales for Secret Recipe's cakes for Kuala Lumpur branch in year 2018.

Month 2018	Sales (RM)
January	35,000
February	50,000
March	42,000
April	40,000
May	60,000
June	56,000
July	35,000
August	33,000
September	40,000
October	56,000
November	70,000
December	86,000

Table 2

i. Compute a 4-month moving average forecast from June 2018 until August 2018. (6 marks)

ii. Compute a 6-month moving average forecast for December 2018, if the actual sales in November turn out to be RM65, 000. (2 marks)

iii. Compute 3-months weighted moving average forecast for April 2018 by using a weight of 3, 2, 1, with the heaviest weight applied to the most recent month. (4 marks)

iv. Calculate a 3-month weighted moving average forecast for February 2019 by using weight of 3 for January 2019, weight of 2 for December 2018, and weight of 1 for November 2018. Assume the sales for January 2019 is RM40, 000. (4 marks)

(b) Explain any **TWO (2)** types of forecasts. (4 marks)

(Total: 20 marks)

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QUESTION 3

(a) Define the terms below:

i. Manufacturing cycle time. (2 marks)

ii. Leans operations. (2 marks)

(b) List **ALL** the **FIVE (5)** of the 5S practised by most companies. (5 marks)

(c) H&M Malaysia produces a limited edition jacket for December 2018 sales. Jessica, an operations supervisor has been assigned to reduce inventory by using a Kanban system. The following data has been provided in ***Table 3***:

Daily demand	8,000 jackets
Production lead time	5 days
Safety stock	½ day
Kanban size	1000 jackets

Table 3

i. Calculate demand during lead time. (2 marks)

ii. Calculate the safety stock. (2 marks)

iii. How many Kanbans does H&M need? (2 marks)

iv. Due to high demand in the middle of December 2018, H&M needs to increase their production for the jacket. The daily demand and safety stocks are now increased to 12,000 jackets and 1 day respectively. What is the new number of Kanban H&M needs? (5 marks)

(Total: 20 marks)

QUESTION 4

(a) Define human resource strategy. (2 marks)

(b) Identify any **FOUR (4)** constraint on human resource strategy and provide **ONE (1)** example for each constraint. (8 marks)

(c) List and explain the **FIVE (5)** types of job design. (10 marks)

(Total: 20 marks)

End of Paper.